

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/018396

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ B60K7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ B60K7/00, F16D3/04, F16D3/62

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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|---------------------------|-----------|----------------------------|-----------|
| Jitsuyo Shinan Koho | 1922-1996 | Toroku Jitsuyo Shinan Koho | 1994-2005 |
| Kokai Jitsuyo Shinan Koho | 1971-2005 | Jitsuyo Shinan Toroku Koho | 1996-2005 |

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | WO 2002/083446 A1 (Bridgestone Corp.), 24 October, 2002 (24.10.02), Full text; Figs. 18 to 19 & US 2004/99455 A & EP 1380459 A1 | 1-6 |
| Y | Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 74615/1973 (Laid-open No. 20954/1975) (Mitsubishi Electric Corp.), 10 March, 1975 (10.03.75), Full text; Figs. 1 to 3 (Family: none) | 1-3, 6 |

 Further documents are listed in the continuation of Box C. See patent family annex.

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| * Special categories of cited documents: | |
| "A" | document defining the general state of the art which is not considered to be of particular relevance |
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| "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "&" | document member of the same patent family |

Date of the actual completion of the international search
08 February, 2005 (08.02.05)Date of mailing of the international search report
01 March, 2005 (01.03.05)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | JP 7-279987 A (Nippon Piston Ring Co., Ltd.), 27 October, 1995 (27.10.95), Full text; Figs. 1 to 8 (Family: none) | 1, 2 |
| Y | CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No. 13166/1992 (Laid-open No. 64537/1993) (Toyo Tire and Rubber Co., Ltd.), 27 August, 1993 (27.08.93), Full text; Figs. 1 to 2 (Family: none) | 4 |
| Y | JP 8-145068 A (Nippon Piston Ring Co., Ltd.), 04 June, 1996 (04.06.96), Full text; Figs. 1 to 8 (Family: none) | 5 |
| Y | JP 4-219526 A (Nippon Piston Ring Co., Ltd.), 10 August, 1992 (10.08.92), Full text; Figs. 1 to 6 (Family: none) | 6 |
| A | JP 4-88210 A (Nippon Piston Ring Co., Ltd.), 23 March, 1992 (23.03.92), Full text; Figs. 1 to 9 (Family: none) | 1-6 |
| A | JP 4-151019 A (Ricoh Co., Ltd.), 25 May, 1992 (25.05.92), Full text; Figs. 1 to 2 (Family: none) | 1-6 |
| A | Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 146636/1989 (Laid-open No. 84422/1991) (Ricoh Co., Ltd.), 27 August, 1991 (27.08.91), Full text; Figs. 1 to 4 (Family: none) | 1-6 |